



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,505	12/22/2003	David Neary		8201
7590	02/03/2006			
David L. Neary 3612 Eden Drive Dallas, TX 75287-6261			EXAMINER KIM, TAE JUN	
			ART UNIT 3746	PAPER NUMBER

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/743,505

Applicant(s)

NEARY, DAVID

Examiner

Ted Kim

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/22/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The substitute specification filed 09/21/2005 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: it does not contain a statement that there is no new matter. See MPEP 608.01(q)

### **608.01(q) Substitute or Rewritten Specification [R-3] - 600 Parts, Form, and Content of Application**

#### **608.01(q) Substitute or Rewritten Specification [R-3]**

#### **37 CFR 1.125 Substitute specification.**

(a) If the number or nature of the amendments or the legibility of the application papers renders it difficult to consider the application, or to arrange the papers for printing or copying, the Office may require the entire specification, including the claims, or any part thereof, be rewritten.

(b) Subject to § 1.312, a substitute specification, excluding the claims, may be filed at any point up to payment of the issue fee if it is accompanied by a statement that the substitute specification includes no new matter.

(c) A substitute specification submitted under this section must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown pursuant to this paragraph.

Moreover, even with such a statement, applicant's substitute specification has been

reviewed and it would appear to raise the issue of new matter. For instance, using the marked up copy of the specification, on page 9, end of the 1<sup>st</sup> paragraph, the "pressure range of greater than 1.5 bar absolute" appears to be new matter; on page 12, 4<sup>th</sup> line from the end

“during all operations encompassing variations in electric power generation demands” also appears to be new matter; on page 35, the last two lines, “irregardless of the said example non-conventional turbine power engine unit’s output of mechanical or electrical power.”

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 10-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant refers to creating an equilibrium temperature of e.g. 1800 °F due to the speed of light, 186,000 miles per second, casing a rapid rate of radial heat transfer between the two streams of common molecular constituents ... in both the specification and in paragraph (c) of claim 10. Applicant’s explanation is incorrect because: chemical equilibrium only occurs when the time allowed for chemical reaction (which is dictated by the fluid mechanics) is long relative to the rates of the chemical reactions, i.e. the ratio of time constants approaches infinity in the idealized case ( $T_{\text{flow}}/T_{\text{kinetic}} \rightarrow \infty$ ). In a combustion reaction, the time is not long enough to establish chemical equilibrium but rather is controlled by the transients of chemical kinetics. This is one of the reasons that NO<sub>x</sub> is formed in the quantities that it is, based on thermodynamic equilibrium calculations its

quantities would be much lower than based on reality. However, in the typical combustion reaction, the time is insufficient for the NO<sub>x</sub> reaction to ever reach equilibrium. Applicant references the Irving Glassman textbook on combustion, and, these precepts should be well established in that textbook. Furthermore, applicant uses the speed of light as the primary determinant for the establishment of the rapid heat transfer. However, applicant fails to take into consideration that applicant is mixing multiple flows and equilibrium can only be established when looking at the slowest time constants not the most rapid. The mixing time/fluid mechanics times and the chemical kinetics times will dictate the establishment of equilibrium, not the radiant heat transfer time constant, which is virtually instantaneous.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 10, paragraph (h) “(or power turbine assembly)” used parenthetically makes it unclear whether the parenthetical limitation should be regarded as being claimed.
- Claim 11, line 3, “*typically, but not limited to*, the venting...” renders it unclear whether the limitation of venting to the atmosphere is to be part of the claim limitations.

- Claim 17, “although similarly preferred ... can be achieved with other operational variables” renders the claim unclear as to scope.
- Claims 18, paragraph (h), “conventional” gas turbine, claim 20, “conventional” gas turbine, “conventional” hot gas expander renders the claims unclear. What is regarded as “conventional” changes over time and great steps may be made in a short period of time and become the conventional practice. Hence a potential infringer would not know whether this would refer to “conventional” at the time applicant’s invention was made or “conventional” at the time of potential infringement.

#### ***Claim Objections***

6. Claim 12 is objected to because of the following informalities: in paragraph (c), “An” should be —an—and at the end of the claim the semicolon should be replaced by a period. Appropriate correction is required.

#### ***Response to Amendment***

7. The examiner attempted to contact applicant but the last known telephone number of 972-987-8463 was disconnected. Applicant should keep his contact information updated.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 571-272-4829. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

The fax numbers for the organization where this application is assigned are

571-273-8300 for Regular faxes and 571-273-8300 for After Final faxes.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe, can be reached at 571-272-4444.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of Technology Center 3700, whose telephone number is 703-308-0861. General inquiries can also be directed to the Patents Assistance Center whose telephone number is 800-786-9199. Furthermore, a variety of online resources are available at <http://www.uspto.gov/main/patents.htm>



---

Ted Kim	Telephone	571-272-4829
Primary Examiner	Fax (Regular)	571-273-8300
February 1, 2006	Fax (After Final)	571-273-8300
Technology Center 3700 Receptionist	Telephone	703-308-0861
Patents Assistance Center	Telephone	800-786-9199